All version

Service
Service
Service

# Service Manual

**TABLE OF CONTENTS**

**Chapter**

**Technical Specification and Service hints……1**
**Safety Instructions……2**
**Instructions for Use…… 3**
**Mechanical Instructions…… 4**
**Exploded view and Service parts list…….. 5**
**Troubleshooting flow…… 6**
**Overall Block diagram……7**
**Overall Electrical diagram…… 8**
**IRIS CODE……9**
**Revision list…… 10**

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3141 785 30705

**Version 1.5**

PHILIPS

# 1.0 TECHNICAL SPECIFICATION and SERVICE HINTS

## General

| | |
|---|---|
| Dimensions (WxHxD) : | 53.7 X 86.0 X 16.3 mm (2.11 x 3.39 x 0.64 inch) |
| Weight : | 87 g |
| Output power : | 2 x 5 mW (16 Ohm) |
| Frequency response : | 20 – 16 000 Hs |
| Equalizer : | 5-bands |
| Hard disk : | |
| Capacity : | 4GB – 6GB |
| Display : | 128 x 128 pixels, 65K color |
| Backlight : | White |
| Battery : | 630 mAh Li-Ion rechargeable battery |
| Battery life time: | >16hrs |
| File transfer rate using USB2.0 : | >4Mbyte |
| Battery charging current | 450mA |
| Maximum charging time : | 4hr |
| Battery cutoff voltage: | 3.7V |
| Connections: | Headphone Line Out Jack<br>Power Connector |

## Battery level detection

| Detection Level | Typ. |
|---|---|
| 4-step to 3-step voltage | 3.6 – 3.7V |
| 3-step to 2-step voltage | 3.53 – 3.6V |
| 2-step to 1-step voltage | 3.48 – 3.53V |
| Force Power Off voltage | <3.5V |

## Current consumption

| DC-IN SUPPLY (4.5V) | |
|---|---|
| Battery Charging Current | 450mA |
| BATT. SUPPLY (3.7V) | |
| Power Off | 300uA |
| Idle | 30mA |
| Playback without HDD reading | 30mA |
| Playback with HDD reading | 345mA |
| File transfer using USB2.0 | 350mA |

**Headphone out (headphone output load 2x16 ohm)**

| | |
|---|---|
| Maximum output power : | 10 mW |
| Frequency response : | 45Hz – 16kHz (16Ω load)<br>20Hz – 16kHz (15kΩ load) |
| SNR (A-wght) : | 85dB |
| THD (1kHz) : | 0.1% |
| Left-Right Channel Separation : | 45dB typ. (1k Hz)<br>40dB typ. (20Hz – 16kHz) |
| Left-Right Channel Balance : | <1.0dB (1k Hz)<br><2.0dB (20Hz – 16kHz) |

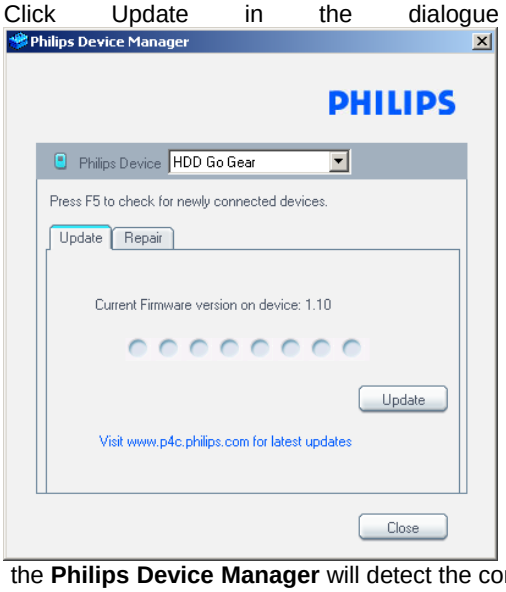
## Supported playback format

| | |
|---|---|
| MP3 : | 8 - 320 Kbps and VBR |
| WMA : | 32 - 192 Kbps |
| Sample rates : | 8, 11.025, 16, 22.050<br>32, 44.1, 48 |
| ID3-tag support : | Yes |
| PC Connectivity : | USB |

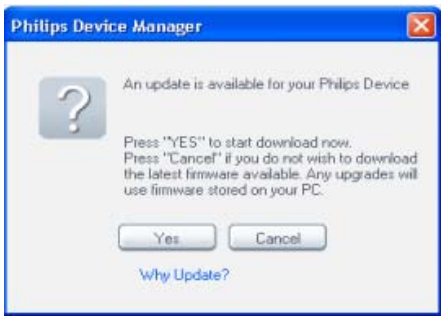
File Transfer
via **Windows Media Player 10** for music and picture playback or Windows Explorer for general data (music playback disabled)

## Firmware and software upgrades

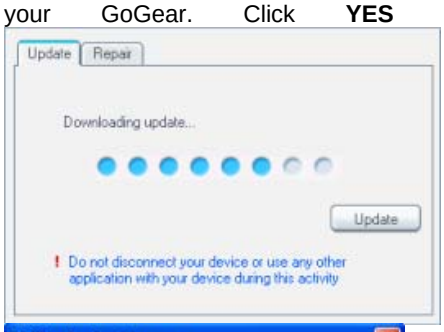
1. If you have not already installed the Device Manager download the latest version of the Device Manager from http://www.philips.com/support. You may need to enter your language preference and the model number e.g.HDD1630, to access the Device/Firmware Manager upgrade file.
2. Download the zip file into a temp folder in your computer. Unzip the file and then double click the Setup.exe file to start the installation of the Device Manager.
3. Once the installation is complete, connect the GoGear to the power supply with the AC/DC adapter.
4. Make sure all other applications such as Philips Device plug-in, Windows Media Player or Windows Explorer that accessing the device are closed or else Device Manager will not recognize the device. Launch the **Philips Device Manager** at **Start->Programs->Philips Device Manager->Philips Device Manager** on your PC.
5. Click Update in the dialogue box




the **Philips Device Manager** will detect the connection of your GoGear and the application will automatically check on the server to see if an update is available and prompt user to download the updated firmware. Click **YES** to start the downloading.

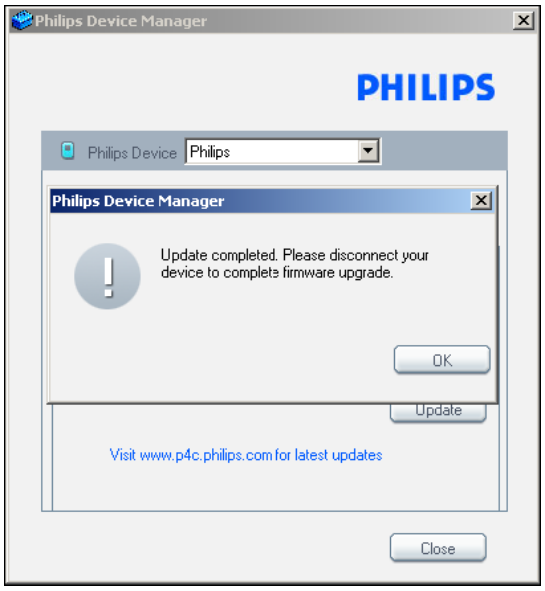

Philips Device Manager
An update is available for your Philips Device
Press "YES" to start download now.
Press "Cancel" if you do not wish to download the latest firmware available. Any upgrades will use firmware stored on your PC.
Yes
Cancel
Why Update?

6. A status bar will show the downloading progress of the firmware. Once the downloading is complete the application will prompt you to install the update onto your GoGear. Click **YES** to confirm


Update
Repair
Downloading update...
Update
Do not disconnect your device or use any other application with your device during this activity

Philips Device Manager
Your update is downloaded and ready to install
Do you want to install it on to the device?
Yes
Cancel
www.p4c.philips.com

7. The application will show the status of updating and at the end you need to click OK to complete the update.




(Please do not disconnect the jukebox during the upgrading process as this interruption may damage the firmware!)

8. Follow all screen instructions to complete the firmware upgrade.

9. The Device Manager will close automatically once the success message is displayed. Close all opened application and then unplug your GoGear.

10. Once the GoGear micro jukebox is disconnected from the computer, the display will show “Firmware Upgrading” for a couple of seconds and then start up as usual. If the message does not disappear after 2 minutes, do a soft reset by pressing and holding the Power on/off key and the volume + key for a couple of seconds.

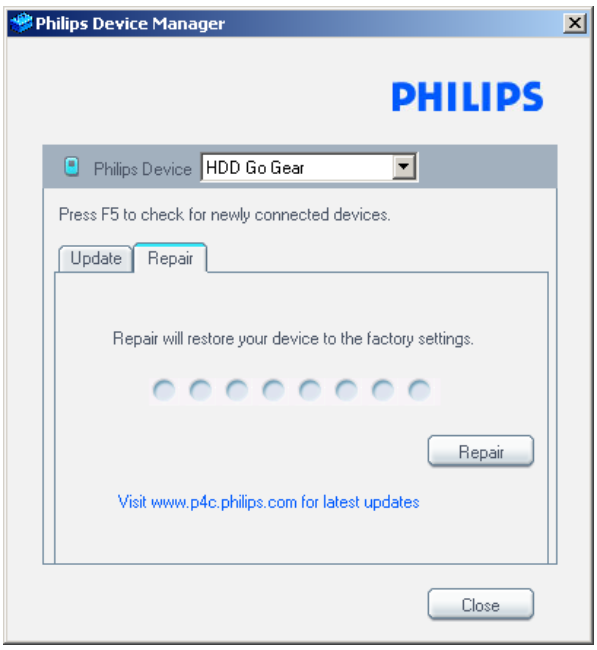
## Repair the firmware with Device Manager

1. If you have not already installed the Device Manager download the latest version of the Device Manager from http://www.philips.com/support. You may need to enter your language preference and the model number e.g.HDD1630, to access the Device/Firmware Manager upgrade file.

2. Download the zip file into a temp folder in your computer. Unzip the file and then double click the Setup.exe file to start the installation of the Device Manager.

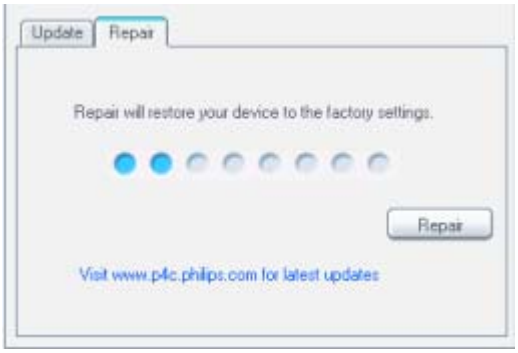
3. Once the installation is complete, connect the GoGear to the power supply with the AC/DC adapter.

4. Make sure all other applications such as Philips Device plug-in, Windows Media Player or Windows Explorer that accessing the device are closed or else Device Manager will not recognize the device. Launch the **Philips Device Manager** at **Start->Programs->Philips Device Manager->Philips Device Manager** on your PC.

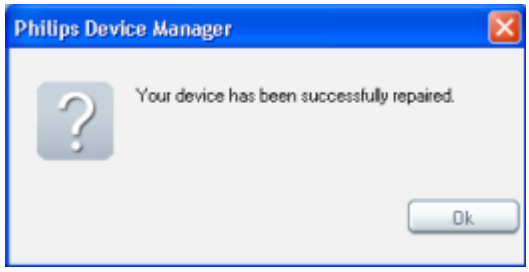


Philips Device Manager
Repair will erase all music and data on your Philips Device. Please back up all your files before repairing your device.
Start Repairing now?
Yes
Cancel
www.p4c.philips.com

5. Click YES to start the downloading. A status bar will show the downloading progress of the firmware. Once the downloading is complete the application will prompt you to install the update onto your GoGear.




6. Once the repair is complete a dialogue box will pop up; click OK and unplug the GoGear from the computer.




IMPORTANT: All music & content of your micro jukebox will be erased once the factory setting is restored.

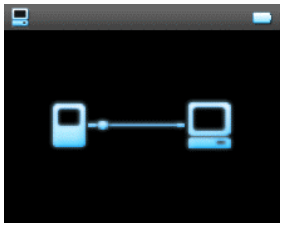
7. Follow all screen instructions to complete the repair.
8. The Device Manager will close automatically once the success message is displayed. Close all opened application and then unplug your micro jukebox.
9. Once the GoGear micro jukebox is disconnected from the computer, the display will show "Firmware Upgrading" for a couple of seconds and then start up as usual.

## Service Hints

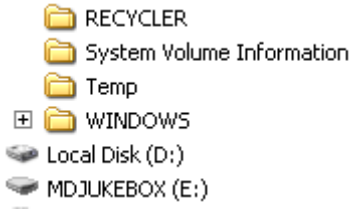
### Re Rebuild database, firmware and Microsoft (Plays For Sure) copy protection key after replacement of hard disk or PCBA

**IMPORTANT: All devices having the hard disk or PCBA replaced must have the firmware image, database and the Plays For Sure key rebuilt before returning to customers.**

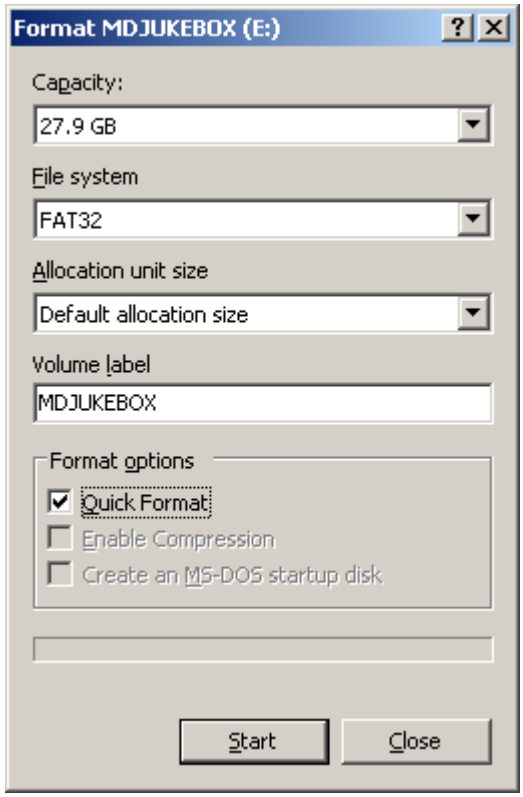
1. Connect the GoGear to the power supply and the computer with the combined charger and USB cable.
2. Reset the device by pressing and holding down the Volume + and the power on/off slider switch until the display turns off.
3. While the device restart, press and hold the volume – key until the Philips splash screen disappear and showing the connection icon to put the device in USB Mass Storage Device mode.



4. The device will be listed as a new drive named GOGEAR or MDJUKEBOX in Windows Explorer.




5. Launch Windows Explorer and then quick format the new drive to the file system FAT32.




IMPORTANT: All music & content of your micro jukebox will be erased once the device is formatted.

6. Unzip and copy all the content of the shipment ui files of the corresponding model version into the root directory of the device. (**CD ROM with the Shipment ui files will be provided to repair workshops**.)
7. Disconnect the GoGear from the computer by clicking on the safely remove hardware icon on the task tray.
8. Wait until the display shows “Burn success”.
9. Reset the device again by pressing and holding down the Volume + and the power on/off slider switch until the display turns off.
10. Upgrade the firmware of the device to the latest version by following the procedure as mentioned under “Firmware software upgrades”

## 2.0 SAFTETY INSTRUCTIONS

**GB** **WARNING**

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD).
Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.
Keep components and tools also at this potential.

**ESD**

**NL** **WAARSCHUWING**

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen.
Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

**F** **ATTENTION**

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).
Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

**D** **WARNUNG**

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).
Unsorgfältige Behandlung im Reparaturfall kan die Lebensdauer drastisch reduzieren.
Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes.
Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

**I** **AVVERTIMENTO**

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

**GB**

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

**NL**

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

**F**

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utiliséés les piéces de rechange identiques à celles spécifiées.

**D**

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Original zustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

**I**

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

"After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA."

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

**GB** **Warning !**

Invisible laser radiation when open.
Avoid direct exposure to beam.

**S** **Varning !**

Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

**SF** **Varoitus !**

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

**DK** **Advarse !**

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling.

## 2.0 SAFETY INSTRUCTIONS

**Battery Handling Guideline**

Since the battery is packed in soft package, to ensure its better performance, it's very important to carefully handle the battery

2.1 Soft Aluminium foil

The soft aluminum packing foil is very easily damaged by sharp edge parts such as Ni-tabs, pins and needles.

- Don't strike battery with any sharp edge parts
- Trim your nail or wear glove before taking battery
- Clean worktable to make sure no any sharp particle

2.2 Sealed edge

Sealing edge is very flimsy

- Don't bend or fold sealing edge

2.3 Folding edge

The folding edge is form in battery process and passed all hermetic test.

- Don't open or deform folding edge

2.4 Tabs

The battery tabs are not so stubborn especially for aluminum tab.

- Don't bend tab

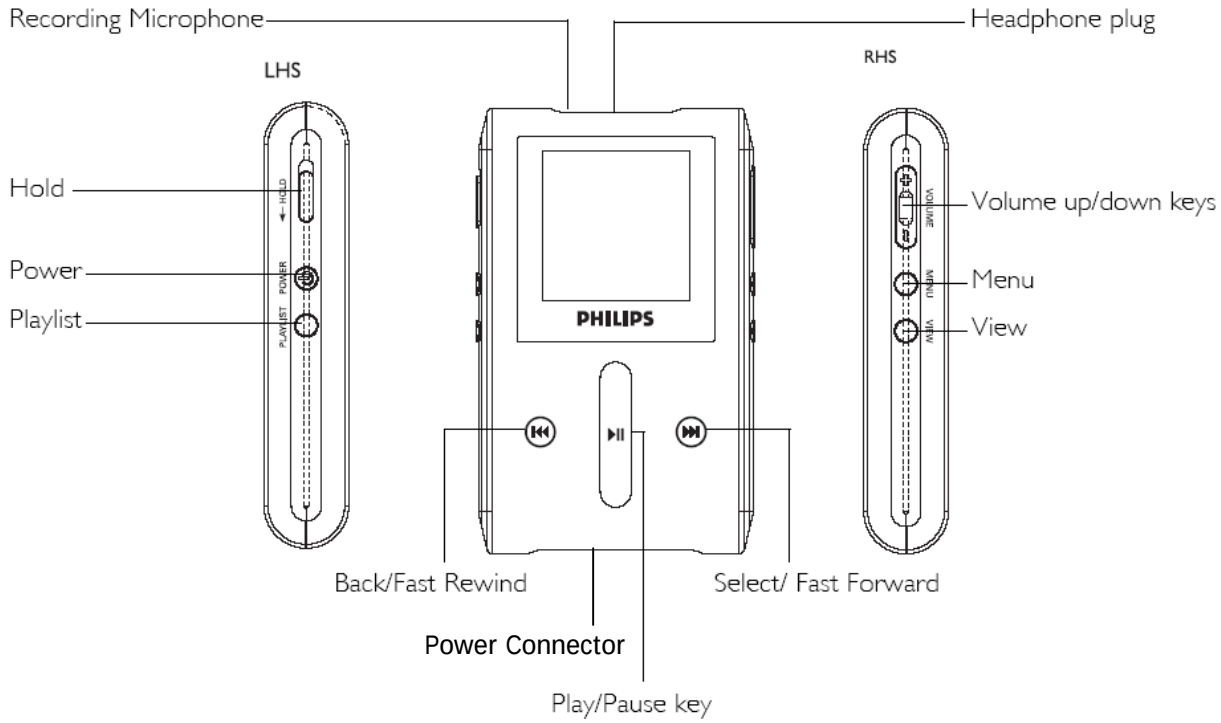
2.5 Mechanical shock

- Don't Fall, hit, bend battery body

2.6 Short

Short terminals of battery is strictly prohibited, it may damage battery.

## 3.0 INSTRUCTION FOR USE




| Press this | To |
|---|---|
| ⏻ POWER (about 3 seconds) | Power on / off |
| HOLD | Lock all touch control keys |
| ▶II | Play / Pause songs |
| ⏮ | Back / Fast rewind |
| ⏭ | Select / Fast forward |
| + VOLUME - | Control volume |
| VERTICAL TOUCH STRIP | Scroll through lists |
| MENU | Access list of menu options |
| VIEW | Switch between library and play screen |
| PLAYLIST | Add song to "Playlist on the go" |

## 4.0 MECHANICAL INTRUCTIONS

### Set Disassembly

1. Add a tape over the knobs on two side before opening the set to prevent the knobs will fall out the set after open.

2. Remove the cosmetic screw on the back cover by Allen Key.

3. Finger inset the gap of the top cover assy and the housing, and then carefully lift up the top cover.

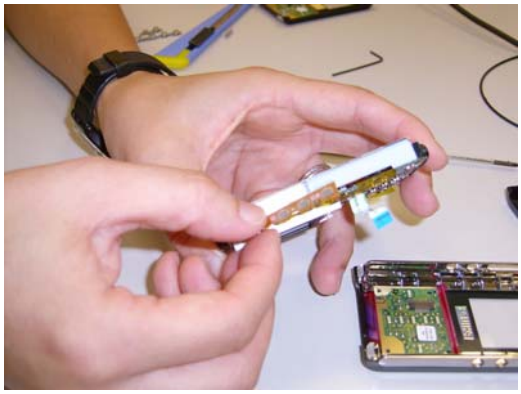
4. Generally remove the housing.

## 4.0 MECHANICAL INTRUCTIONS

5. Remove the 4 screws on four corners. See pointed arrows.

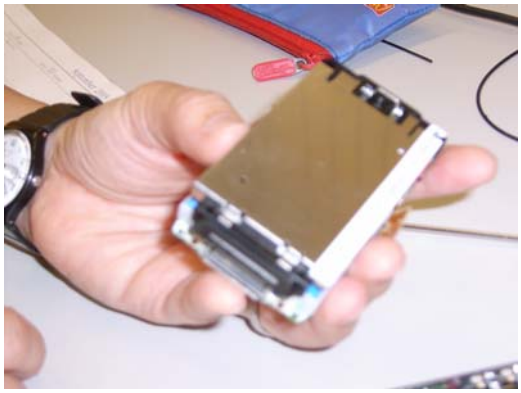
6. Carefully pull out the mainboard assy, which include the HDD drive, LCD, battery and PCBA board.

7. Disconnect the flex cable from the front touch screen module carefully, then free the top cover assy.

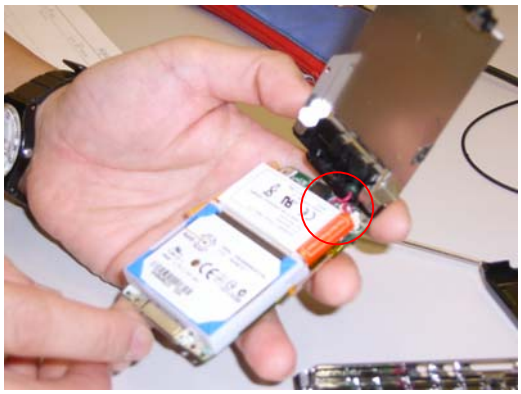


8. Lift up the double side tape of the side buttons.

## 4.0 MECHANICAL INTRUCTIONS



9. Turn to the bottom side.

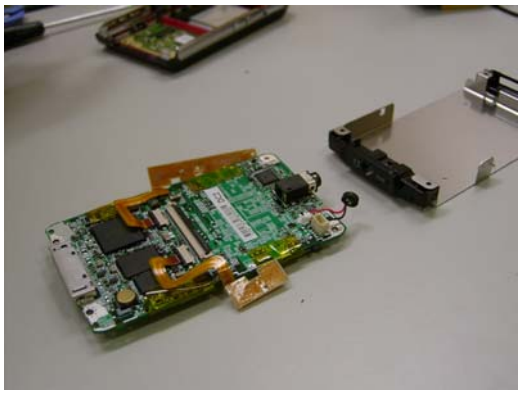


10. Open up the metal shielding and disconnect the cable connected to the battery. Carefully disassemble the mini mic as circled in the picture from the plastic audio jack holder.

11. Remove the battery part form PCBA.

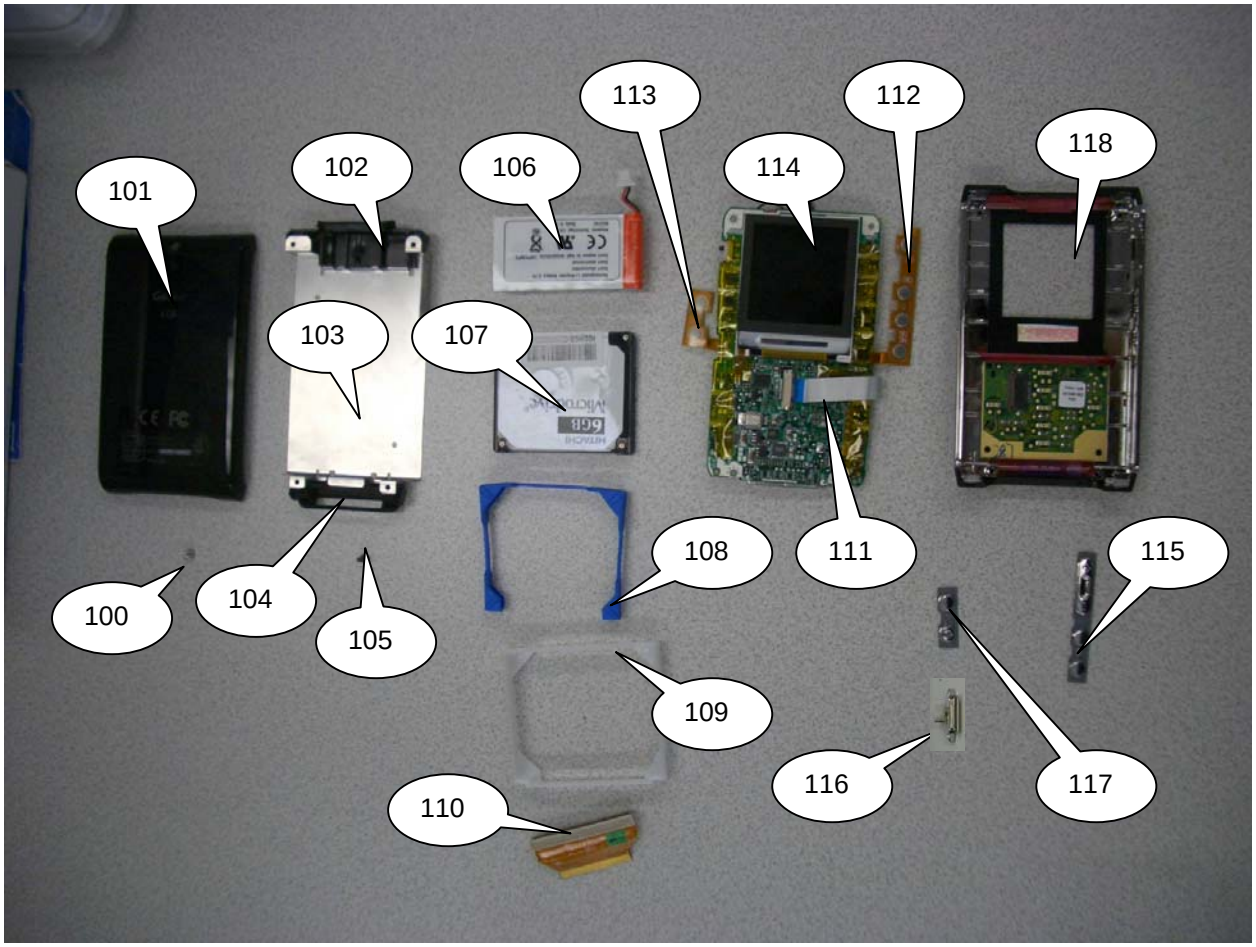
12. Lift up the hard disk and disconnect the flex cable underneath from the PCBA.

## 4.0 MECHANICAL INTRUCTIONS



13. After remove both battery and hard disk.

## 5.0 EXPLODED VIEW AND SERVICE PARTS LIST

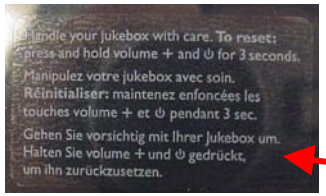



MECHANICAL PARTS

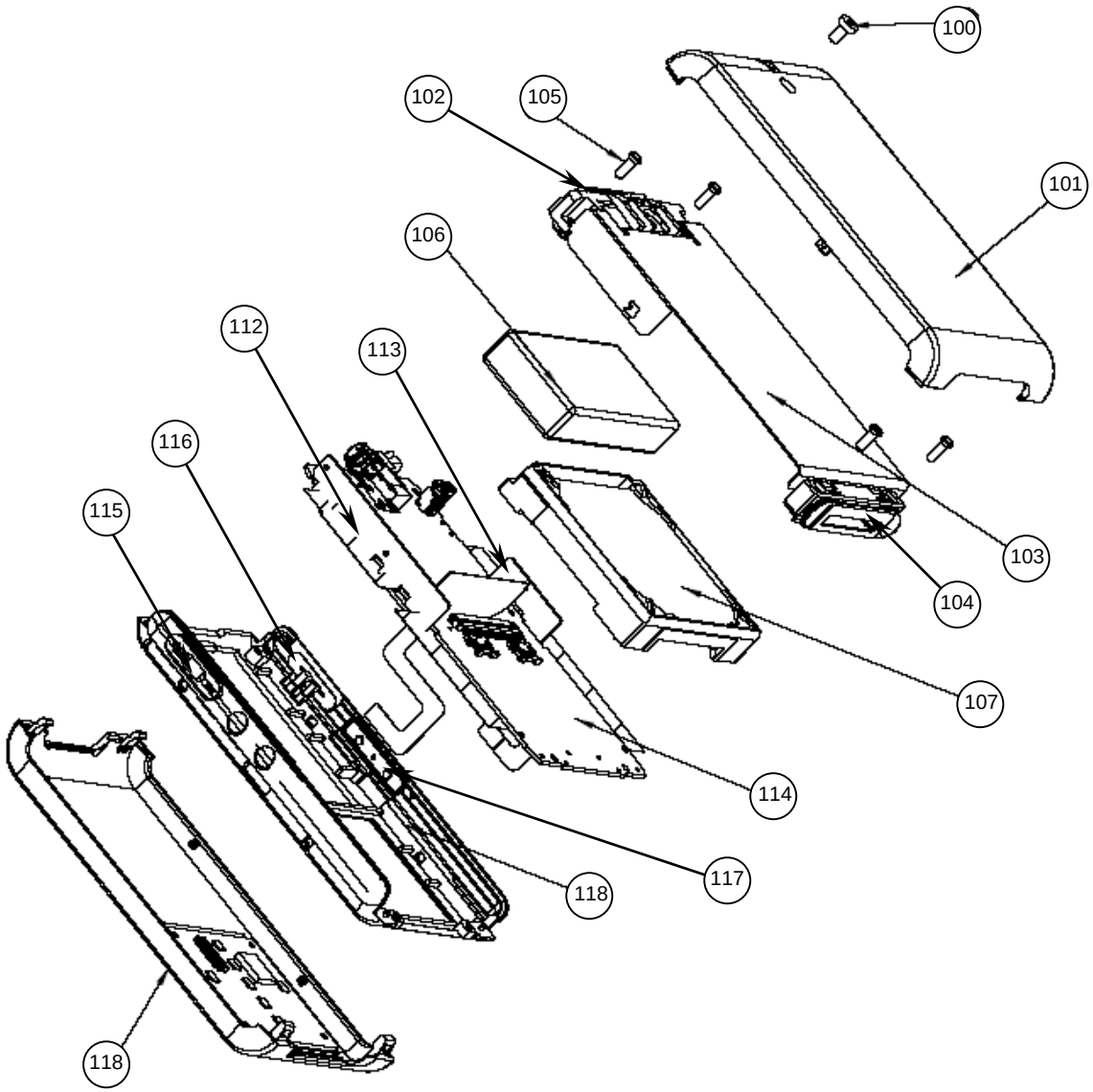
| | | |
|---|---|---|
| 100 | 994000003554 | COSMETIC SREW PHOENIX |
| 101 | 994000003555 | BACK CABINET PHOENIX |
| 102 | 994000003559 | AUDIO JACK HOLDER ASSY |
| 103 | 994000003556 | SHIELDING PHOENIX |
| 104 | 994000003572 | CRADLE HOLDER PHOENIX |
| 105 | 994000003558 | SCREW 1.7X5 PHOENIX |
| 106 | 994000003557 | BATTERY PACK PHOENIX |
| 107 | 282206200084 | HDD 4GB (HDD1420/00) |
| | 282206200079 | HDD 6GB (HDD1620/00/05, HDD1630/17 & HDD1635/17) |
| 108 | 994000003563 | HDD DAMPER PHOENIX |
| 109 | 994000003564 | HDD HOLDER PHOENIX |
| 110 | 994000003568 | HD FPC PHOENIX |
| 111 | 994000003565 | FFC PHOENIX |
| 112 | 994000003566 | KEY FPC 1 PHOENIX |
| 113 | 994000003567 | KEY FPC 2 PHOENIX |
| 114 | 994000003569 | PCBA W/Z RADIO LCD PHOENIX (HDD1630/17 & HDD1635/17) |
| | 994000003571 | PCBA W/O RADIO LCE PHOENIX (HDD1420/00 & HDD1620/00/05) |
| 115 | 994000003573 | RIGHT SIDE KEYPAD PHOENIX |
| 116 | 994000003574 | HOLD KEY PHOENIX |
| 117 | 994000003575 | LEFT SIDE KEYPAD PHOENIX |
| 118 | 994000003576 | HOUSING TOUCHPAD PHOENIX |

MISCELLENEOUS

| | | |
|---|---|---|
| | 994000003527 | EARPHONE SHE9500 |
| | 994000003577 | AC ADAPTOR AD7150/00 (FOR /00) |
| | 994000003578 | AC ADAPTOR AD7153/17 (FOR /17) |
| | 994000003579 | AC ADAPTOR AD715B/05 (FOR /05) |
| | 994000003791 | CRADLE ASSY PHOENIX (FOR HDD1635/17 ONLY) |
| | 994000003877 | CD-PHX-EU (FOR /00 & /05) |
| | 994000003878 | CD-PHX-US (FOR /17) |
| | 994000003876 | POUCH FOR PHOENIX |
| | 994000005704 | CONTROL CASE PAC001 (FOR HDD1835/17 ONLY) |
| | 996500039152 | PHOENIX RESET LABEL |


Handle your jukebox with care. To reset:
Press and hold volume + and ⏻ for 3 seconds.
Manipulez votre jukebox avec soin.
Réinitialiser: maintenez enfoncées les
touches volume + et ⏻ pendant 3 sec.
Gehen Sie vorsichtig mit Ihrer Jukebox um.
Halten Sie volume + und ⏻ gedrückt,
um ihn zurückzusetzen.

## 5.0 EXPLODED VIEW AND SERVICE PARTS LIST




MECHANICAL PARTS

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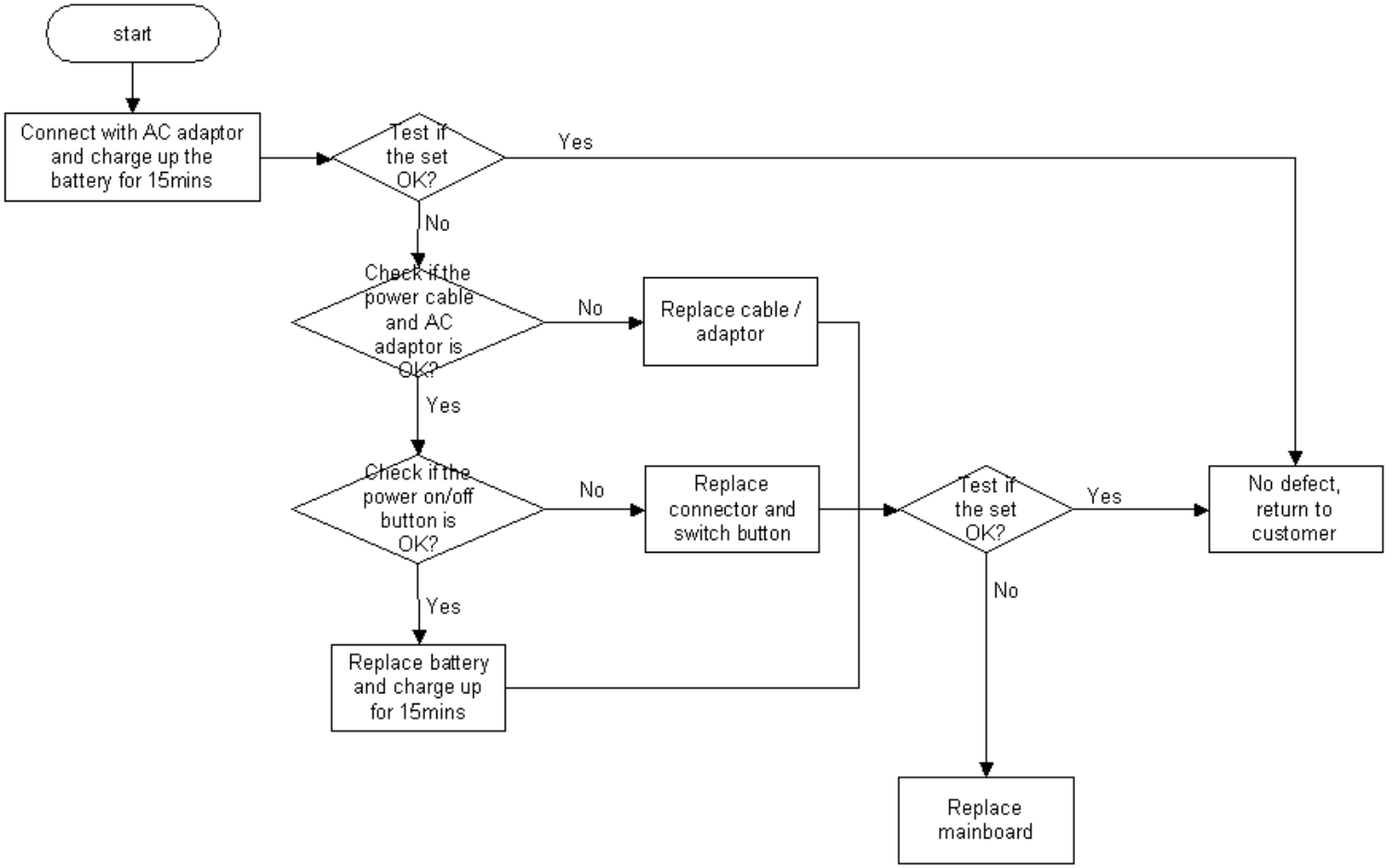
| 107 | 282206200084 | HDD 4GB (HDD1420/00) |
| | 282206200079 | HDD 6GB (HDD1620/00/05, HDD1630/17 & HDD1635/17) |
| 108 | 994000003563 | HDD DAMPER PHOENIX |
| 109 | 994000003564 | HDD HOLDER PHOENIX |
| 110 | 994000003568 | HD FPC PHOENIX |
| 111 | 994000003565 | FFC PHOENIX |
| 112 | 994000003566 | KEY FPC 1 PHOENIX |
| 113 | 994000003567 | KEY FPC 2 PHOENIX |
| 114 | 994000003569 | PCBA W/Z RADIO LCD PHOENIX (HDD1630/17 & HDD1635/17) |
| | 994000003571 | PCBA W/O RADIO LCE PHOENIX (HDD1420/00 & HDD1620/00/05) |
| 115 | 994000003573 | RIGHT SIDE KEYPAD PHOENIX |
| 116 | 994000003574 | HOLD KEY PHOENIX |
| 117 | 994000003575 | LEFT SIDE KEYPAD PHOENIX |
| 118 | 994000003576 | HOUSING TOUCHPAD PHOENIX |

MISCELLENEOUS

| | | |
|---|---|---|
| | 994000003527 | EARPHONE SHE9500 |
| | 994000003577 | AC ADAPTOR AD7150/00 (FOR /00) |
| | 994000003578 | AC ADAPTOR AD7153/17 (FOR /17) |
| | 994000003579 | AC ADAPTOR AD715B/05 (FOR /05) |
| | 994000003791 | CRADLE ASSY PHOENIX (HDD1635/17) |
| | 994000003877 | CD-PHX-EU (FOR /00 & /05) |
| | 994000003878 | CD-PHX-US (FOR /17) |
| | 994000003876 | POUCH FOR PHOENIX |
| | 994000005704 | CONTROL CASE PAC001 (FOR HDD1835/17 ONLY) |
| | 996500039152 | PHOENIX RESET LABEL |

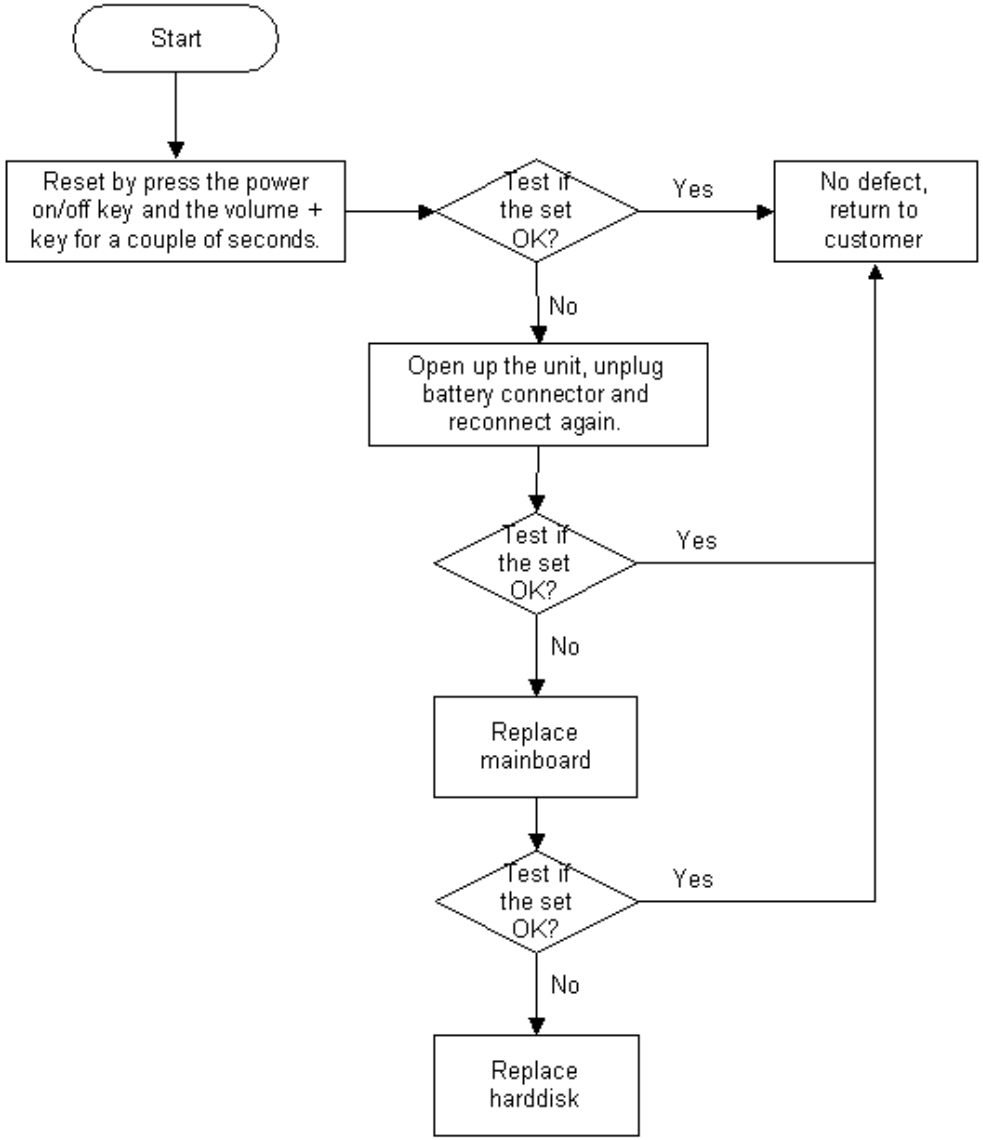
## 6.0 TROUBLESHOOTING FLOW

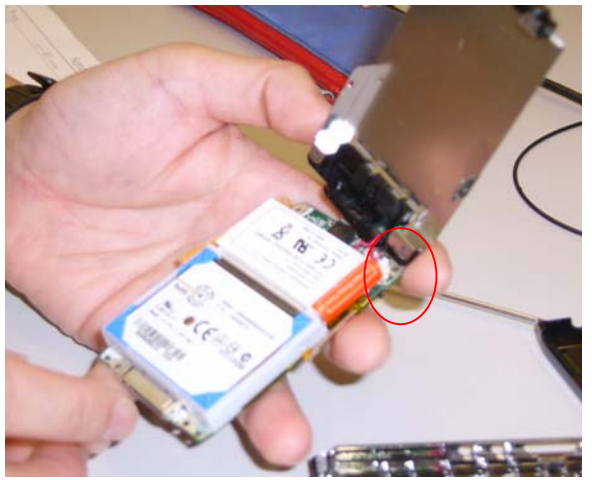
### SYMPTOM 1: NO POWER



## 6.0 TROUBLESHOOTING FLOW

### SYMPTOM 2: JUKEBOX FREEZES / HANGS UP

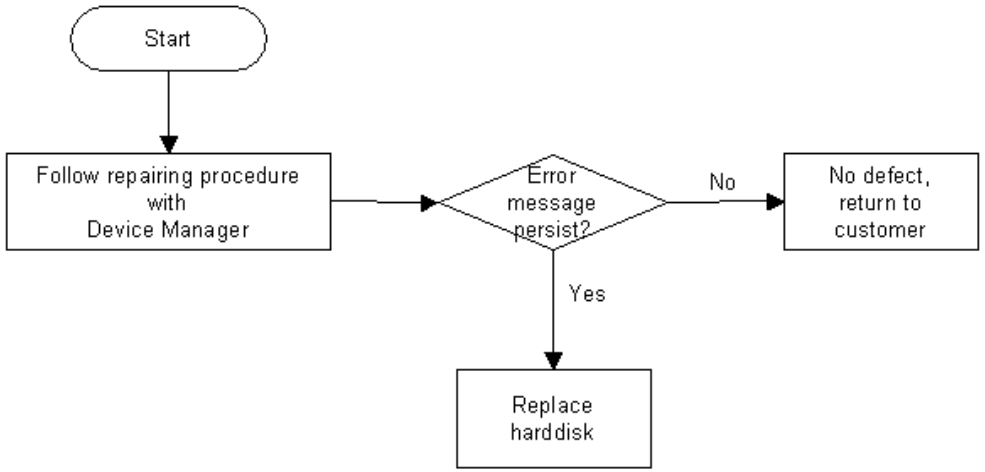


Open up the unit, unplug battery connector and reconnect again

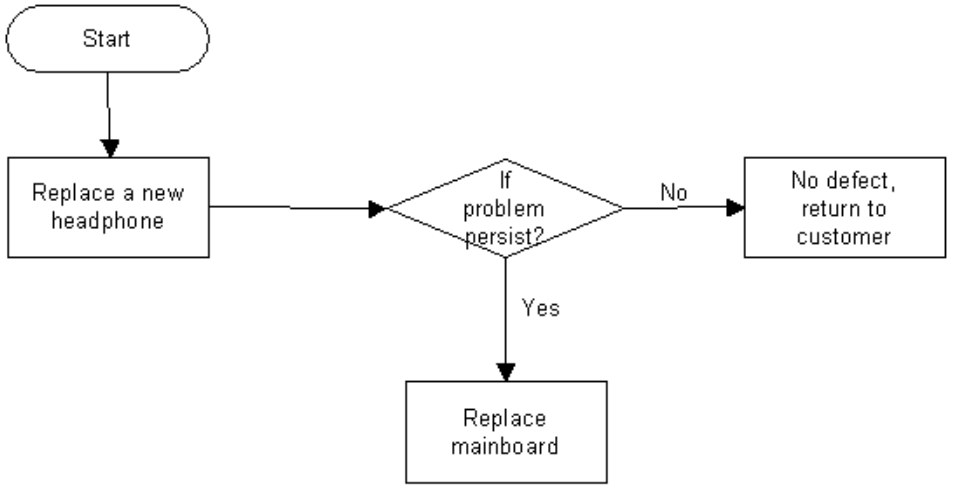
## 6.0 TROUBLESHOOTING FLOW

### SYMPTOM 3: ERROR MESSAGE SCROLLS ON THE DISPLAY

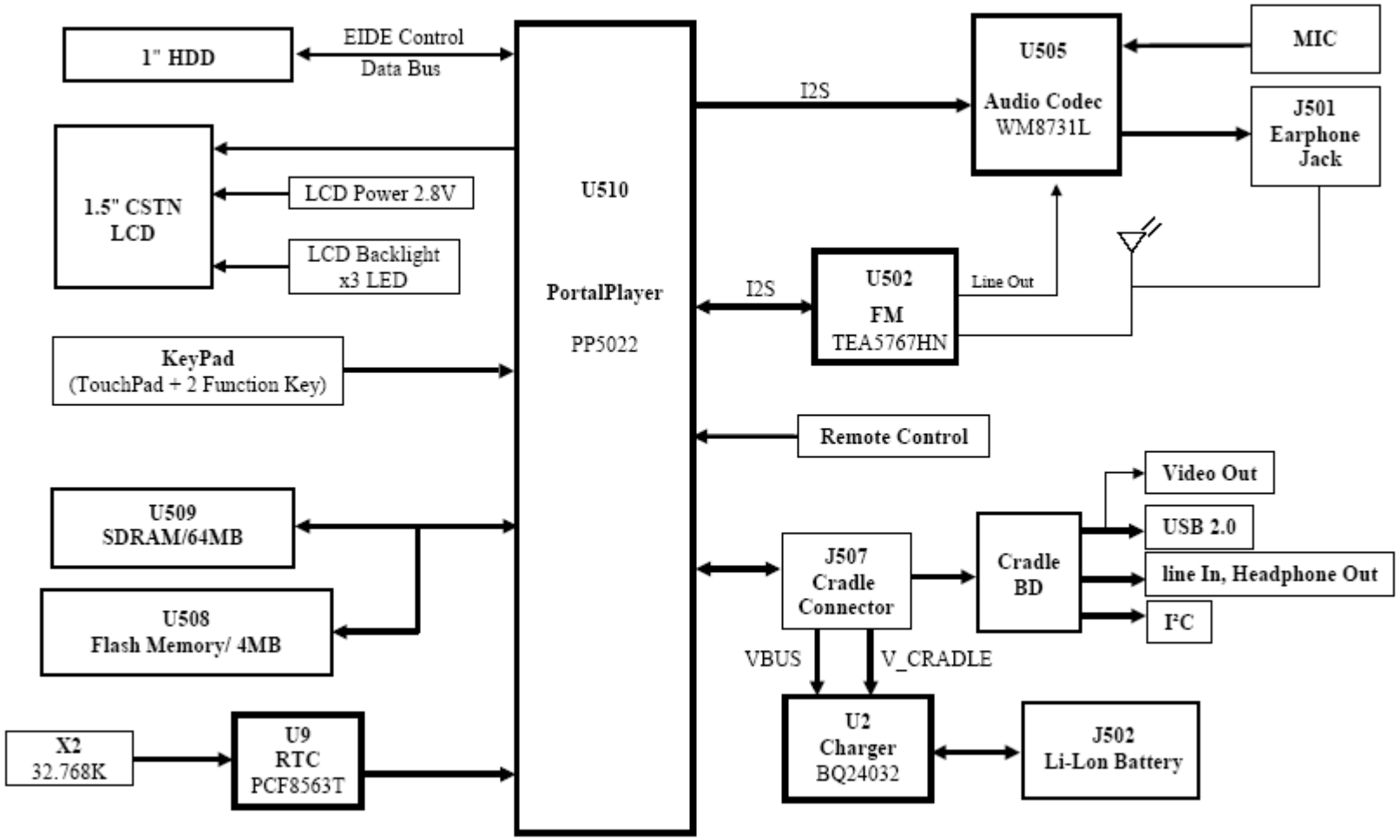


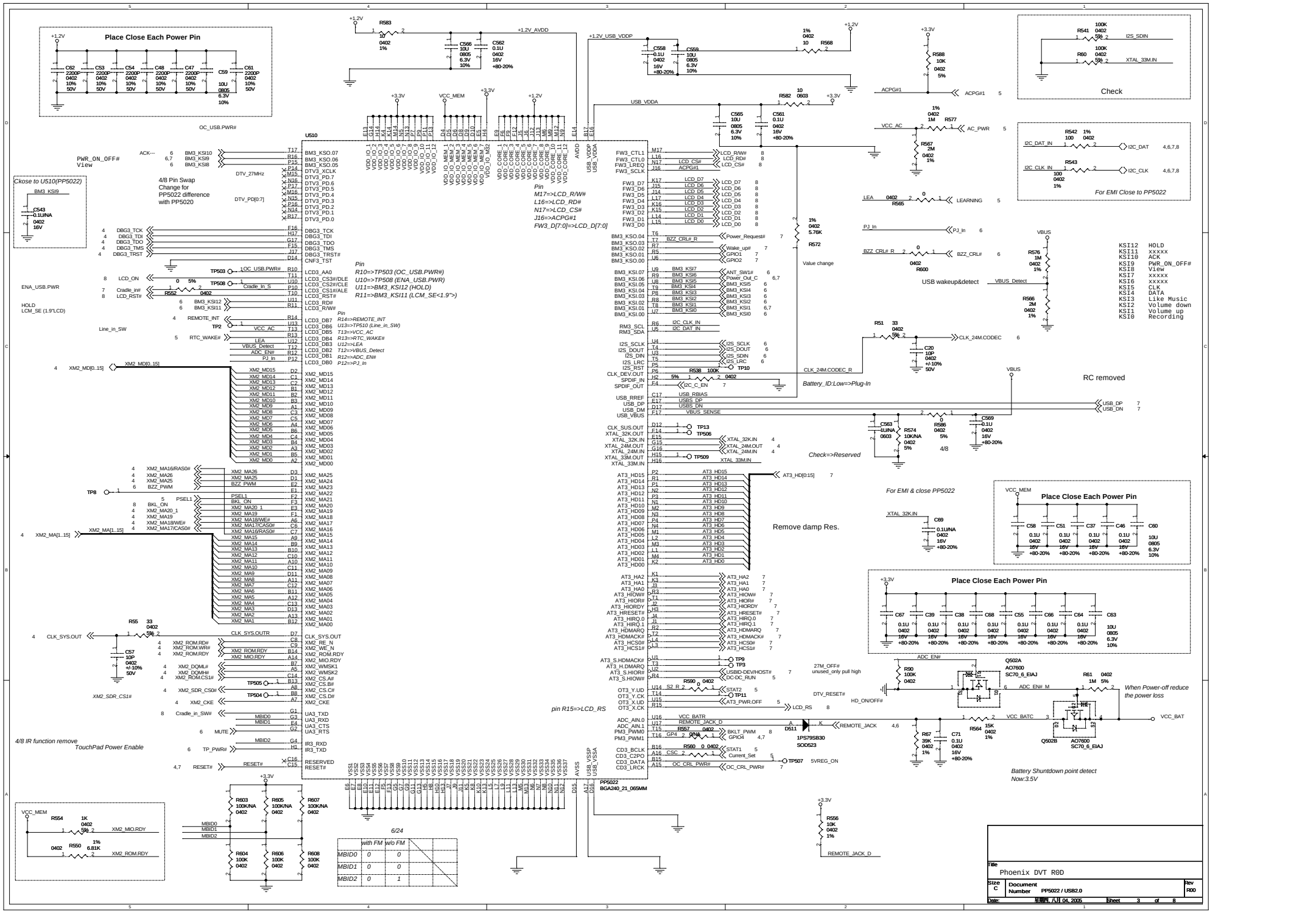
## 6.0 TROUBLESHOOTING FLOW

### SYMPTOM 4: NO SOUND



## 7.0 BLOCK DIAGRAM




Place Close Each Power Pin
C62 2200P 0402 10% 50V
C53 2200P 0402 10% 50V
C54 2200P 0402 10% 50V
C48 2200P 0402 10% 50V
C47 2200P 0402 10% 50V
C59 10U 0805 6.3V 10%
C61 2200P 0402 10% 50V
OC_USB.PWR#
U510
PWR_ON_OFF#
View
DTV_27MHz
DTV_PD[0:7]
4/8 Pin Swap
Change for
PP5022 difference
with PP5020
Ckose to U510(PP5022)
C543 0.1UINA 0402 16V
Pin
M17=>LCD_R/W#
L16=>LCD_RD#
N17=>LCD_CS#
J16=>ACPG#1
FW3_D[7:0]=>LCD_D[7:0]
Pin
R10=>TP503 (OC_USB.PWR#)
U10=>TP508 (ENA_USB.PWR)
U11=>BM3_KSI12 (HOLD)
R11=>BM3_KSI11 (LCM_SE<1.9"V)
ENA_USB.PWR
HOLD
LCM_SE (1.9"LCD)
Line_in_SW
Pin
R14=>REMOTE_INT
U13=>TP510 (Line_in_SW)
T13=>VCC_AC
R13=>RTC_WAKE#
U12=>LEA
T12=>VBUS_Detect
R12=>ADC_EN#
P12=>PJ_In
XM2_MD[0..15]
XM2_MA[1..15]
XM2_SDR_CS1#
TouchPad Power Enable
4/8 IR function remove
CLK_SYS.OUT
pin R15=>LCD_RS
PP5022
BGA240_21_065MM
6/24
with FM
w/o FM
MBID0 0 0
MBID1 0 1
MBID2 0 1
R603 100K/NA 0402
R605 100K/NA 0402
R607 100K/NA 0402
R604 100K 0402
R606 100K 0402
R608 100K 0402
R554 1K 0402 5%
R550 6.81K 1%
R583 10 0402 1%
C566 10U 0805 6.3V 10%
C562 0.1U 0402 16V +80-20%
+1.2V_AVDD
+1.2V_USB_VDDP
C558 0.1U 0402 16V +80-20%
C559 10U 0805 6.3V 10%
R568 10 0402 1%
R582 10 0603
C565 10U 0805 6.3V 10%
C561 0.1U 0402 16V +80-20%
USB_VDDA
R588 10K 0402 5%
ACPG#1
R541 100K 0402 5%
R60 100K 0402 5%
I2S_SDIN
XTAL_33M.IN
Check
R567 2M 0402 1%
VCC_AC
AC_PWR
R542 100 1% 0402
R543 100 1% 0402
I2C_DAT_IN
I2C_CLK_IN
I2C_DAT
I2C_CLK
For EMI Close to PP5022
R565 0 0402
LEA
LEARNING
PJ_In
R572 5.76K 1%
Value change
R600 0 0402
BZ_CRL# R
BZ_CRL#
R576 1M 0402 1%
R566 2M 0402 1%
VBUS
VBUS_Detect
USB wakeup&detect
KSI12 HOLD
KSI11 xxxxx
KSI10 ACK
KSI9 PWR_ON_OFF#
KSI8 View
KSI7 xxxxx
KSI6 xxxxx
KSI5 CLK
KSI4 DATA
KSI3 Like Music
KSI2 Volume down
KSI1 Volume up
KSI0 Recording
R51 33 0402 5%
CLK_24M.CODEC
C20 10P 0402 +/-10%
Battery_ID:Low=>Plug-In
RC removed
USB_DP
USB_DN
C563 1UINA 0603
R574 10K/NA 0402 5%
C569 0.1U 0402 16V +80-20%
4/8
Check=>Reserved
TP13
TP506
TP509
XTAL_32K.IN
XTAL_24M.IN
XTAL_33M.IN
AT3_HD[0:15]
For EMI & close PP5022
C69 0.1UINA 0402 16V +80-20%
Remove damp Res.
Place Close Each Power Pin
C58 C51 C37 C46 C60
0.1U 0402 16V +80-20%
10U 0805 6.3V 10%
Place Close Each Power Pin
C67 C39 C38 C68 C55 C66 C64 C63
0.1U 0402 16V +80-20%
10U 0805 6.3V 10%
R55 33 0402 5%
C57 10P 0402 +/-10%
50V
TP8
TP505
TP504
TP9
TP3
TP11
TP507
5VREG_ON
R590 0 0402
R560 0 0402
STAT2
STAT1
Current_Set
USBID-DEV/HOST#
DC-DC_RUN
ATS_PWR.OFF
OC_CRL_PWR#
27M_OFF#
unused_only pull high
DTV_RESET#
HD_ON/OFF#
ADC_EN#
R90 100K 0402
Q502A AO7600 SC70_6_EIAJ
R61 1M 0402 5%
When Power-off reduce the power loss
VCC_BATC
VCC_BAT
Q502B AO7600 SC70_6_EIAJ
R67 39K 0402 1%
C71 0.1U 0402 16V +80-20%
R564 15K 0402 1%
REMOTE_JACK
D511 1PS79SB30 SOD523
R557 0 0402
R556 10K 0402 1%
REMOTE_JACK_D
Battery Shuntdown point detect
Now:3.5V
Title
Phoenix DVT R0D
Size C
Document Number PP5022 / USB2.0
Rev R00
Date: 星期四, 八月 04, 2005
Sheet 3 of 8

Power Supply Voltage:1.65V~1.95V

BANK 0 FLASH MEMORY
512Kx16Bits => 1MBYTE

SDRAM Pin:BYTE# need to pull high to VCC_MEM

Flash: SST(SST39WF400A-90-4C,1.8V)=283439400001
AMIC(A29L400UG-70F,3.3V)=283480190001

RAM TYPE/WIDTH (UPPER 2 BITS ARE FIRMWARE SELECT)

| ADDRESS | | | DESCRIPTION | DEFAULT |
|---|---|---|---|---|
| A7 | A6 | A5 | | |
| 0 | X | 0 | SRAM 16-BIT | |
| 0 | X | 1 | SRAM 32-BIT | |
| 1 | X | 0 | SDRAM 16-BIT | X X 0 |
| 1 | X | 1 | SDRAM 32-BIT | |

BOOT VECTOR LOCATION (HARDWARE SELECT)

| ADDRESS | DESCRIPTION |
|---|---|
| A15 A14 | |
| 0 0 | EXT ROM0 (0000:0000) (DEFAULT) |
| 0 1 | EXT ROM1 (0800:0000) |
| 1 0 | BOOTROM UART |
| 1 1 | BOOTROM OTHER |

BOOT CLOCK SOURCE (HARDWARE SELECT)

| ADDRESS | DESCRIPTION |
|---|---|
| A17 A16 | |
| 0 0 | 24.000MHZ (DEFAULT) |
| 0 1 | 24.576MHZ |
| 1 0 | 48.000MHZ |
| 1 1 | RESERVED |

BOOT OPTION

| ADDRESS | DESCRIPTION |
|---|---|
| A19 | |
| 0 | 0 = IDE0 (DEFAULT) |
| 1 | 1 = IDE 1 |

JTAG CONFIG (HARDWARE SELECT)

| ADDRESS | DESCRIPTION |
|---|---|
| A26 A25 | |
| 0 0 | 00 = Serial (CPU->COP)(DEFAULT) |
| 0 1 | 01 = CPU only (CPU) |
| 1 0 | 10 = COP only (COP) |
| 1 1 | 11 = Parallel (CPU\|COP) |

FLASH BUS WIDTH

| ADDRESS | DESCRIPTION |
|---|---|
| A1 | |
| 0 | 0 = 16 BIT |
| 1 | 1 = 8 BIT |

Power Supply Voltage:1.65V~1.95V

16Mx16(256Mbit): Infineon=283780190001
Sumsung=283780190002

4/12 Change R & C value for PP5022

Only For PP5022 Ver.B CKE reset issue
Can be eliminate

Replace for Ver.C

4/12 For Sub items

Place Close Each Power Pin

Let "XM2_MA17/CAS0#" open from FAE note

REMOTE Power-On CONTROL

REMOTE CONTROL

These net length must be equivalent

FPC/FFC-12P/0.5MM/NA
6239-012-001-800

For EMI & close U505 (RTC)

4/13 change Footprint size from SOD123(BAT43W-I/r=0.5uA) to SOT523(BAT54T-I/r=2uA)

4/12

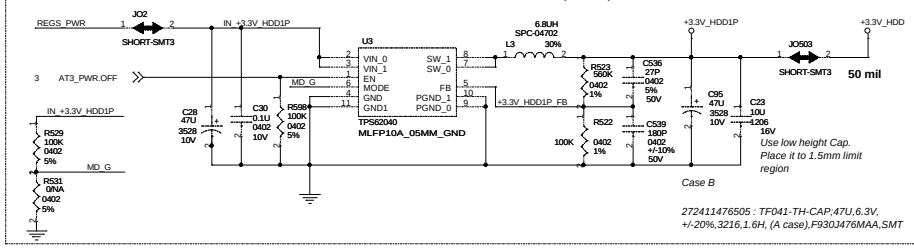
I(charge current)< 0.006mA

| | | | |
|---|---|---|---|
| Title | Phoenix DVT R0D | | |
| Size C | Document Number FLASH / SDRAM / RTC | | Rev R00 |
| Date: 星期四, 八月 04, 2005 | Sheet 4 of 8 | | |

dI=Vo*(1-Vo/Vi)/(L*f)
Imax=Iomax+(dI/2)

## 4/14 HD Power IC change from XC6366 to TPS62040

*神波 SPC-04702-6R8-GP (4.7*4.7*2)*



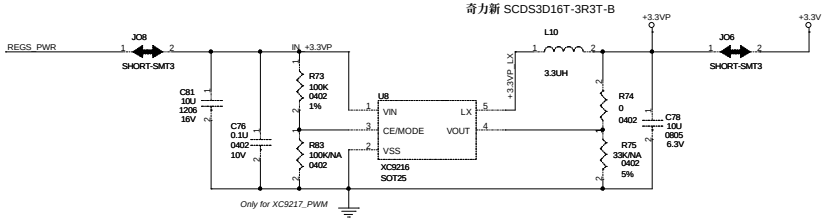

*Use low height Cap. Place it to 1.5mm limit region*

*Case B*

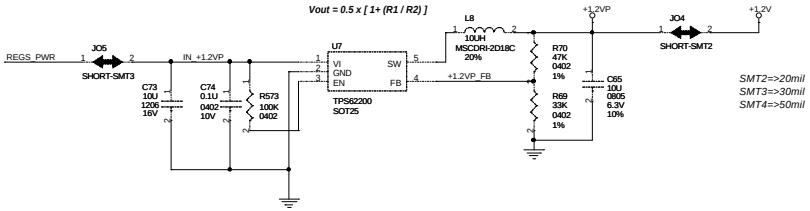
*272411476505 : TF041-TH-CAP;47U,6.3V, +/-20%,3216,1.6H, (A case),F930J476MAA,SMT*

*4/14 CoLayout two select one*

## 奇力新 SCDS3D16T-3R3T-B

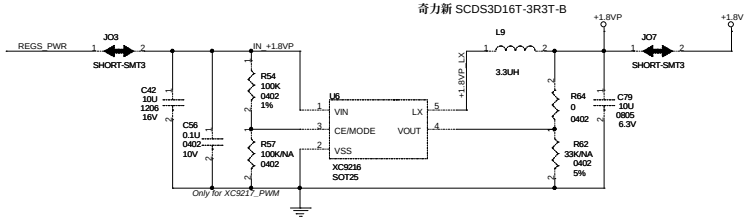


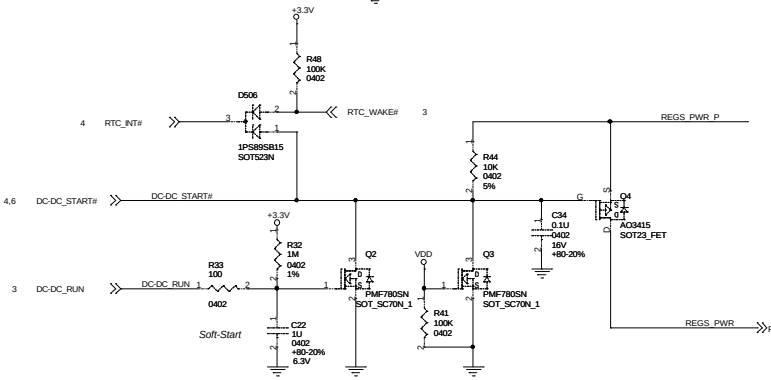

## 美磊 MSCDRI-2D18-100MG (H=1.8mm)



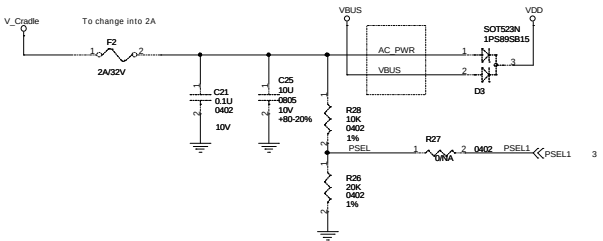

*SMT2=>20mil*
*SMT3=>30mil*
*SMT4=>50mil*

## 奇力新 SCDS3D16T-3R3T-B

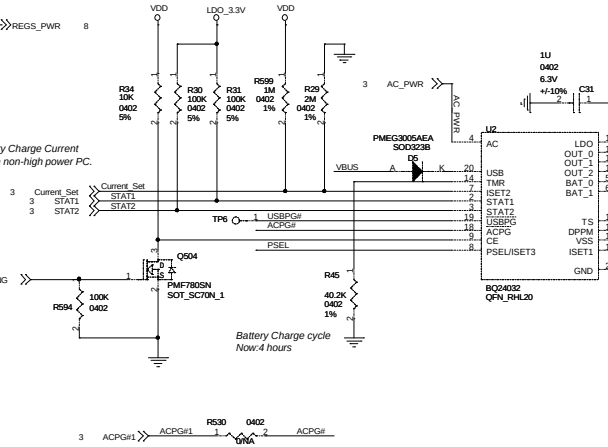



For Only AC or USB Input to Auto-Power-On
To show the Battery charge status




*To set Battery Charge Current when Plug-in non-high power PC.*




*4/7 Remove L15 0402GA Bead filter*

*Battery Connector*

*Battery Charge cycle Now:4 hours*

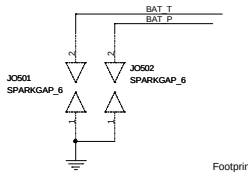
*Check Pin assignment*

*Set Charg Current 450mA*

*Value change*

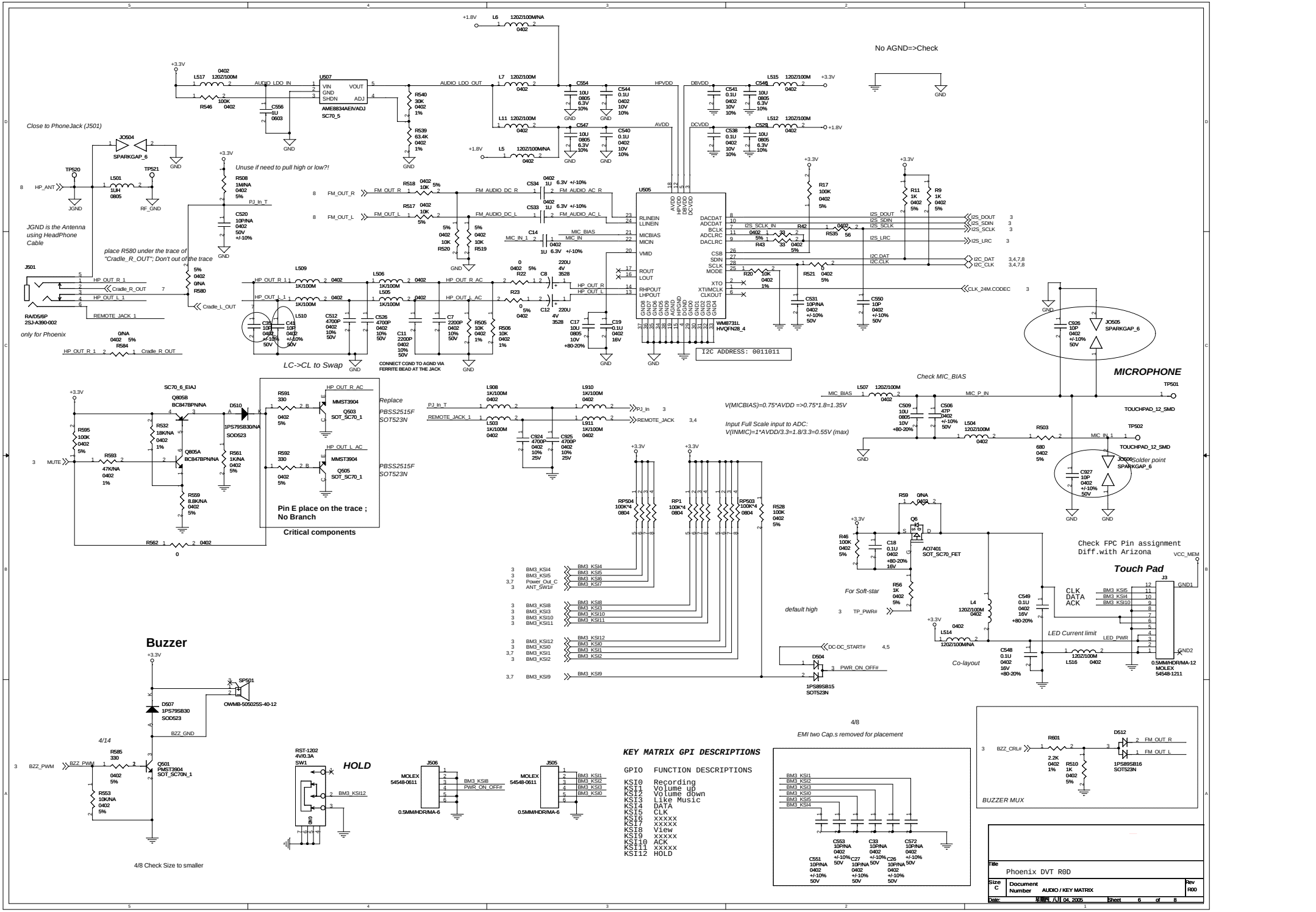
*Set Adaper power 1A*

*ADD EMI ESD Protect*



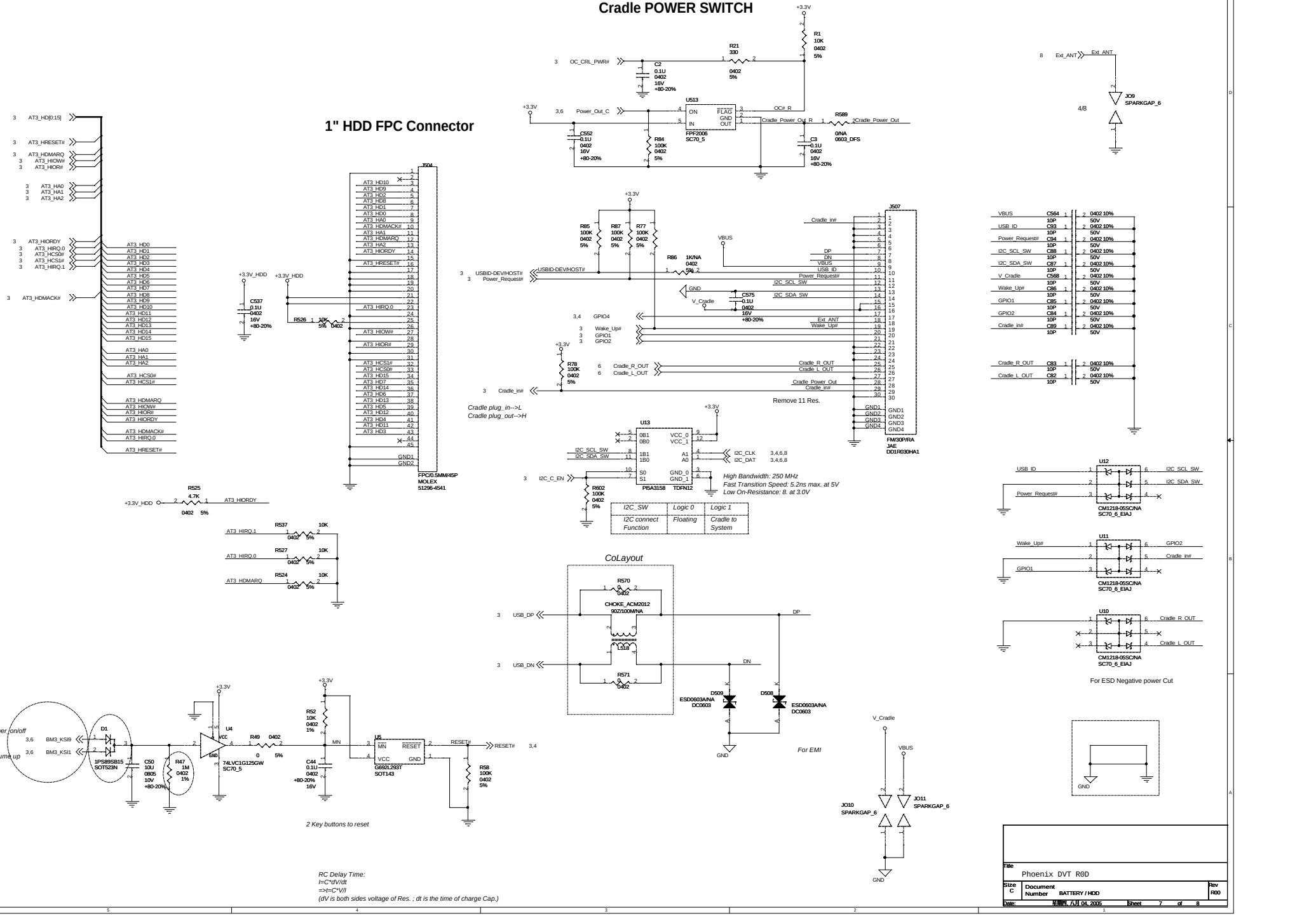

Footprint=SPARKGAP-6

| | | | |
|---|---|---|---|
| Title | Phoenix DVT R0D | | |
| Size C | Document Number SYSTEM POWER / RESET | | Rev R00 |
| Date: 星期四, 八月 04, 2005 | Sheet 5 of 8 | | |


No AGND=>Check
Close to PhoneJack (J501)
JGND is the Antenna using HeadPhone Cable
Unuse if need to pull high or low?!
place R580 under the trace of "Cradle_R_OUT"; Don't out of the trace
only for Phoenix
LC->CL to Swap
CONNECT CGND TO AGND VIA FERRITE BEAD AT THE JACK
I2C ADDRESS: 0011011
MICROPHONE
Check MIC_BIAS
V(MICBIAS)=0.75*AVDD =>0.75*1.8=1.35V
Input Full Scale input to ADC:
V(INMIC)=1*AVDD/3.3=1.8/3.3=0.55V (max)
Solder point
Check FPC Pin assignment
Diff.with Arizona
Touch Pad
For Soft-star
default high
LED Current limit
Co-layout
Buzzer
HOLD
Pin E place on the trace ; No Branch
Critical components
Replace
PBSS2515F
SOT523N
4/8 Check Size to smaller
4/8
EMI two Cap.s removed for placement
BUZZER MUX
KEY MATRIX GPI DESCRIPTIONS
GPIO FUNCTION DESCRIPTIONS
KSI0 Recording
KSI1 Volume up
KSI2 Volume down
KSI3 Like Music
KSI4 DATA
KSI5 CLK
KSI6 xxxxx
KSI7 xxxxx
KSI8 View
KSI9 xxxxx
KSI10 ACK
KSI11 xxxxx
KSI12 HOLD
Phoenix DVT R0D
AUDIO / KEY MATRIX
R00
Sheet 6 of 8

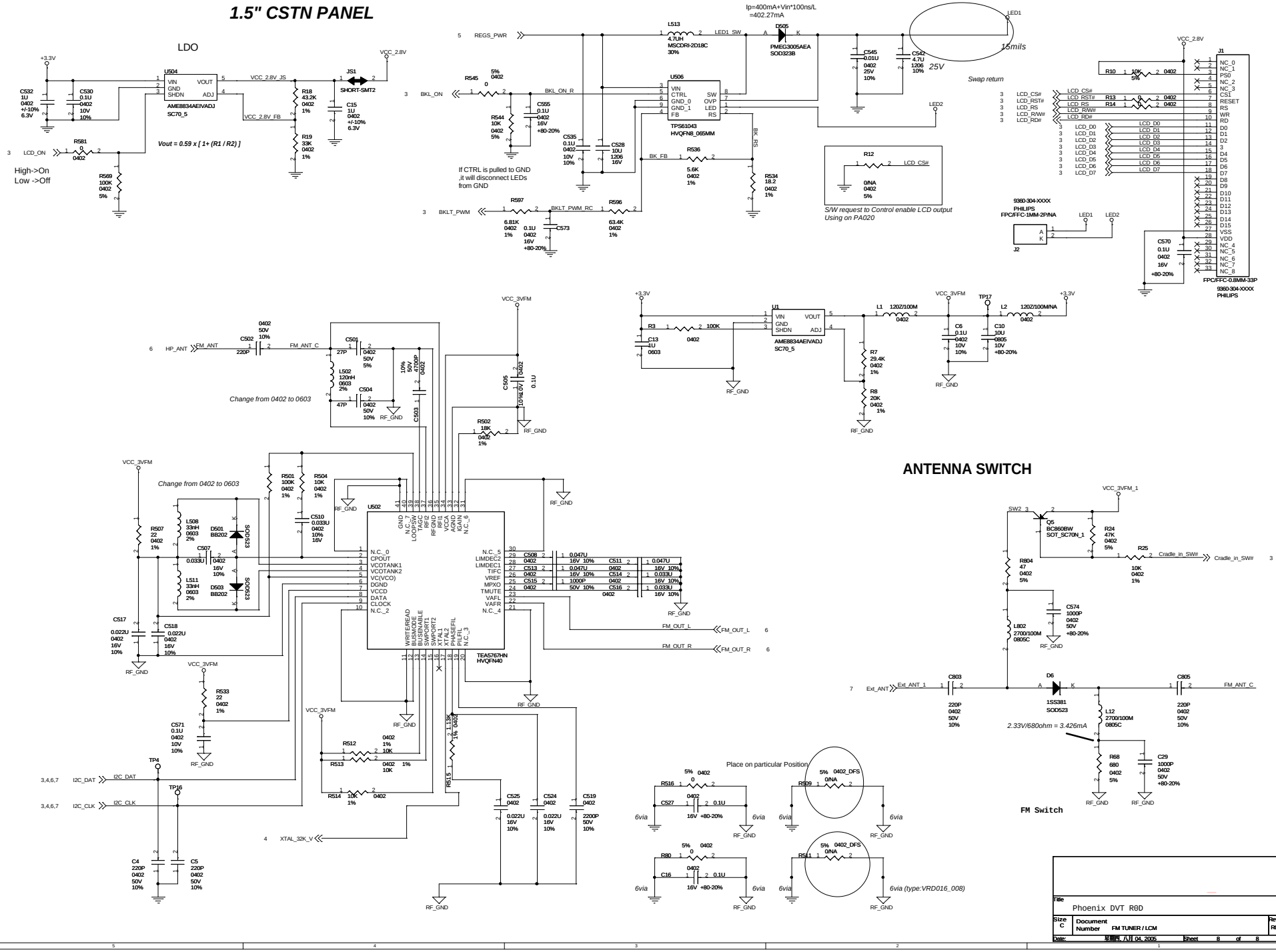
# Cradle POWER SWITCH

# 1" HDD FPC Connector




| | | | |
|---|---|---|---|
| Title | Phoenix DVT R0D | | |
| Size C | Document Number BATTERY / HDD | | Rev R00 |
| Date: 星期四, 八月 04, 2005 | | Sheet 7 of 8 | |

# 1.5" CSTN PANEL




| | |
|---|---|
| Title | Phoenix DVT R0D |
| Size C | Document Number FM TUNER / LCM |
| Rev | R00 |
| Date: | 星期四, 八月 04, 2005 |
| Sheet | 8 of 8 |

## 9.0 REVISION LIST

Version 1.0 (3141 785 30700)

- Initial release HDD1420/HDD1620/HDD1630/DD1635

Version 1.1 (3141 785 30701)
Chapter 5 – Service part list revised service 12NC as listed below

- Added the new part cradle assy for HDD1635/17 (994000003791)

Version 1.2 (3141 785 30702)
Chapter 5 – Service part list, revised service 12NC as listed below

- Added the new part pouch 994000003876 and CD disc 994000003877 for Europe and 994000003878 for US

Version 1.3 (3141 785 30703)
Chapter 5 – Service part list update

- Added the new part Control Case PAC001 12NC 994000005704 for HDD1835/17

Version 1.4 (3141 785 30704)
Chapter 2 – Safety instructions

- Added the battery storage and handling guideline

Version 1.5 (3141 785 30705)
Chapter 4 – Mechanical Instruction

- Modify the disassembly procedure by adding a tap over the knobs before opening the set

Chapter 5 – Service part list update

- Added the 12NC of RESET LABEL 996500039192